

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:23

First Dose M/F: NA / NA

Lab: NIEHS

C Number: C92003
Lock Date: 04/27/1994
Cage Range: All
Date Range: All
Reasons For Removal: All
Removal Date Range: All
Treatment Groups: All
Study Gender: Both
PWG Approval Date NONE

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Lab: NIEHS

**B6C3F1 Mouse Male
7M**

DAY ON TEST	B6C3F1 Mouse Male 7M																				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	8	4	4	6	4	4	4	8	6	4	7	4	4	4	4	7	1	4	4	7	4
	1	2	4	5	8	0	1	4	6	9	0	1	3	4	0	1	2	5	6	8	9

Alimentary System

Intestine Large, Cecum	+																					
Hyperplasia, Lymphoid		3																				
Intestine Small, Jejunum			+																			
Liver	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+
Angiectasis							4													3		
Clear Cell Focus																						X
Clear Cell Focus, Multiple																						X
Eosinophilic Focus															X	X	X					X
Eosinophilic Focus, Multiple																						X
Hepatocyte, Midzonal, Vacuolization																						2
Cytoplasmic																						
Hepatocyte, Necrosis																						3
Mixed Cell Focus																						
Mixed Cell Focus, Multiple																						
Mesentery			+																			
Fat, Necrosis			3																			
Pancreas	+		+	+	+	A	+		+	+	+	A	A	+	+	A	+	A	+	+	A	M
Acinus, Atrophy												1			1							
Acinus, Cytoplasmic Alteration																						
Acinus, Degeneration																						
Acinus, Hypertrophy																						

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

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Date Report Requested: 10/21/2014

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Lab: NIEHS

**B6C3F1 Mouse Male
7M**

B6C3F1 Mouse Male 7M	DAY ON TEST																										
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		1	2	4	5	8	0	1	4	6	9	0	1	3	4	0	1	2	5	6	8	9	1	2	0	5	8
		2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	
		3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	
		4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	
		5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	
		6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
		7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	
		8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	

Acinus, Vacuolization Cytoplasmic

2

2

Stomach, Forestomach

Stomach, Glandular

Cardiovascular System

Endocrine System

Adrenal Cortex	+	M	+	+	+	+	+	+	+	+	+	A	+	A	+	+	M	M	+	+	A	+	
Capsule, Hyperplasia	2		2	3		2	1	2	1		2	3	3	1		2		2	2	2	2	4	
Hypertrophy	2		3	2		2				2	2	1		1		2		1	1	1	1		
Infiltration Cellular, Histiocyte																							
Adrenal Medulla	+	M	+	+	A	+	M	+	+	+	A	+	+	A	+	A	+	M	M	+	+	A	+
Islets, Pancreatic	+	+	+	+	A	+	+	+	+	+	A	+	+	A	M	A	+	+	M	+	+	+	+
Hyperplasia	4	4	4	3		4	4	4	4	3	4	4		3		4	3	4	4	4	3	4	
Pituitary Gland	M	M	+	+	+	M	+	+	+	+	M	+	+	+	+	M	+	+	A	+	+	A	+
Pars Distalis, Cyst						1																	
Thyroid Gland	+	+	+	+	A	+	+	+	+	+	A	+	+	A	M	A	+	+	A	M	+	+	M
Follicle, Cyst							3		4									2		2	2		
Follicular Cel, Hyperplasia	1		1				1	1	1	1									1				

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Lab: NIEHS

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7M**

DAY ON TEST																				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	7	0	0	6	7	7	0	5	7	6	7	7	7	0	7	4	7	7	2	7
3	3	1	1	6	3	3	1	8	3	5	3	3	3	1	0	7	3	3	8	3
8	4	4	6	4	4	4	8	6	4	7	4	4	4	4	7	1	4	4	7	4
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	3	4	5
	1	2	4	5	8	0	1	4	6	9	0	1	3	4	0	1	2	5	6	8

Infiltration Cellular, Histiocyte

1 2 1 1 2 1 1 2 1 1 2 1 1

Infiltration Cellular, Megakaryocyte

2 2 1 3 2 2 1 2 1 2 1 2 1 2

Inflammation, Granulomatous

3

Spleen

+ + + A + + + + M + + A + A + + A A + + + +

Hematopoietic Cell Proliferation

3

Hyperplasia, Lymphoid

2

Infiltration Cellular, Histiocyte

Thymus M M M M + M M M M + + + M M M M M + M M M M

Integumentary System

Skin

+

Atrophy

2

Dermis, Atrophy

Musculoskeletal System

NONE

Nervous System

NONE

Respiratory System

Lung

+ + + + + + + + + + + + + + + A + + A + + + +

Alveolar Epith, Hyperplasia

3

Alveolus, Infiltration Cellular, Histiocyte

4

Congestion

3

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7M**

DAY ON TEST	B6C3F1 Mouse Male																			
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	2	4	5	8	0	1	4	6	9	0	1	3	4	0	1	2	5	6	8
	9	8	9	8	9	4	6	1	4	7	4	7	1	4	4	7	4	9	6	1
	4	4	4	6	4	4	4	8	6	4	7	4	4	4	7	1	4	4	9	1

Congestion

Inflammation, Granulomatous

Pleura

Special Senses System

Zymbal's Gland

Urinary System

Kidney

+ + + A + + + + + A + + + A + + + + + A + + + + + + +

Cortex, Mineralization

2

Fibrosis

2

Inflammation, Acute

1

Metaplasia, Osseous

1

Nephropathy

1

Pelvis, Hydronephrosis

1

Renal Tubule, Cyst

1

Renal Tubule, Degeneration

2

Renal Tubule, Dilatation

3

Urinary Bladder

+ + + A + + + + + A + + + A + + + + + A M + + + +

2

1

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 Lab: NIEHS

B6C3F1 Mouse Male 7M	DAY ON TEST	Lesion Data																					
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	
		8	8	8	9	9	9	9	9	0	0	0	0	0	0	1	1	1	1	2	2	2	
		4	8	9	0	1	3	4	6	9	2	3	4	5	7	8	9	0	1	4	5	6	
Acinus, Vacuolization Cytoplasmic		1			1	1																2	
Stomach, Forestomach																						+	
Stomach, Glandular																						+	
Cardiovascular System																							
Heart		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cardiomyopathy				1				1	2														
Inflammation																							
Myocardium, Mineralization																							
Valve, Inflammation, Acute																							
Endocrine System																							
Adrenal Cortex	M	+		+	+	+	+	+	+	M	+	+	+	M	+	+	M	+	A	+	M	+	
Capsule, Hyperplasia	2		3	3	1	3	3	1		3	4	3		M	3	2	4	2	2	1	1	2	3
Hypertrophy	1				2	1								2				2			3	2	
Infiltration Cellular, Histiocyte														2									
Adrenal Medulla	M	+		+	+	+	M	+	+	M	+	+	+	M	+	M	M	+	A	A	M	+	
Islets, Pancreatic	+	+		+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	A	+	+	+	
Hyperplasia	4	2		4	4	4		4		4	4	4	4	4	3	3	3	1	3	3	3	4	
Pituitary Gland	+	M		+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	A	+	M	M	
Pars Distalis, Cyst																					A	+	
Thyroid Gland	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	A	+	M	
Follicle, Cyst						1					2	2			2	1							
Follicular Cel, Hyperplasia											1	1	1	2				1			1	1	1

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Lab: NIEHS

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7M

DAY ON TEST																				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	6	5	7	7	7	6	7	7	6	7	7	7	7	7	6	7	7	7	5
	6	2	9	3	3	3	7	3	3	7	3	3	3	3	3	8	3	2	3	0
	8	3	5	4	4	4	2	4	4	0	4	4	4	4	4	5	4	1	4	8
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4
	8	8	8	9	9	9	9	9	9	0	0	0	0	0	1	1	1	1	2	2
	4	8	9	0	1	3	4	6	9	2	3	4	5	7	8	9	0	1	4	5

Inflammation, Acute

1

General Body System

Tissue NOS

+

Genital System

Preputial Gland

Hypertrophy

Seminal Vesicle

Hypertrophy

Infiltration Cellular, Megakaryocyte

Testes

Degeneration

Mineralization

Hematopoietic System

Lymph Node, Mandibular

M M + + + + + + M + + M + + + + + + + A M + + M M + + + + + +

Infiltration Cellular, Histiocyte

3

Infiltration Cellular, Plasma Cell

Infiltration Cellular, Polymorphnuclear

3

Pigmentation

2

Lymph Node, Mesenteric

+ + + + + + M + + + + M + + + + + + + A A M + + M M + + M +

Ectasia

Erythrophagocytosis

3 2 2 2

2 2 2 1

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A. Autolysis precludes evaluation

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I. Insufficient tissue

BLANK - Not examined microscopically

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Date Report Requested: 10/21/2014

Time Report Requested: 22:04:26

First Dose M/F: NA / NA

Lab: NIEHS

Congestion

Inflammation, Granulomatous

Pleura

Special Senses System

Zymbal's Gland

Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	A	+	+	+
Cortex, Mineralization																		1							
Fibrosis																									
Inflammation, Acute																	3								
Metaplasia, Osseous																									
Nephropathy			2				1	1										3			1				2
Pelvis, Hydronephrosis																					3				
Renal Tubule, Cyst																		3							
Renal Tubule, Degeneration																	2								
Renal Tubule, Dilatation		3				2											2				1	3			
Urinary Bladder	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	A	+	+	+	M	+	+

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Lab: NIEHS

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7M**

DAY ON TEST								
	0	0	0	0	0	0	0	0
7	7	7	7	7	0	7	7	7
3	3	3	3	3	1	3	3	3
4	4	4	4	4	4	4	4	4
ANIMAL ID	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	4	4	4	4	4	4	4	4
	5	5	6	6	6	6	6	6
	2	5	0	2	4	5	6	7

TOTALS*Alimentary System**

Intestine Large, Cecum		1	
Hyperplasia, Lymphoid		1	3.0
Intestine Small, Jejunum		1	
Liver	+	+	57
Angiectasis		2	3.5
Clear Cell Focus		4	
Clear Cell Focus, Multiple		4	
Eosinophilic Focus	X	X	9
Eosinophilic Focus, Multiple		4	
Hepatocyte, Midzonal, Vacuolization		1	2.0
Cytoplasmic			
Hepatocyte, Necrosis		4	3.3
Mixed Cell Focus		2	
Mixed Cell Focus, Multiple		1	
Mesentery		1	
Fat, Necrosis		1	3.0
Pancreas	+	+	48
Acinus, Atrophy		2	1.0
Acinus, Cytoplasmic Alteration		1	3.0
Acinus, Degeneration		1	1.0
Acinus, Hypertrophy		1	1.0

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7M**

DAY ON TEST								
	0	0	0	0	0	0	0	0
	7	7	7	7	7	0	7	7
	3	3	3	3	3	1	3	3
	4	4	4	4	4	4	4	4
ANIMAL ID	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	4	4	4	4	4	4	4	4
	5	5	6	6	6	6	6	6
	2	5	0	2	4	5	6	7

***TOTALS**

Acinus, Vacuolization Cytoplasmic	1	2	1	9	1.4
Stomach, Forestomach				1	
Stomach, Glandular				1	

Cardiovascular System

Heart	+	+	+	+	+	+	+	57
Cardiomyopathy								5 1.2
Inflammation						1		1 1.0
Myocardium, Mineralization								1 1.0
Valve, Inflammation, Acute								1 2.0

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	M	45
Capsule, Hyperplasia	2	1	3	2	3	4		40 2.3
Hypertrophy	1	3		1	1			22 1.7
Infiltration Cellular, Histiocyte								1 2.0
Adrenal Medulla	+	+	+	+	+	+	M	39
Islets, Pancreatic	+	+	+	+	+	+	+	51
Hyperplasia	3	4	2	4	4	4	3	49 3.6
Pituitary Gland	M	+	+	+	M	+	I	42
Pars Distalis, Cyst								1 1.0
Thyroid Gland	+	+	+	+	+	+	+	49
Follicle, Cyst	2	1		2				13 2.0
Follicular Cel, Hyperplasia					1			16 1.1

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

- 1) Minimal 3) Moderate
- 2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:26

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Male
7M**

DAY ON TEST								
	0	0	0	0	0	0	0	0
7	7	7	7	7	7	0	7	7
3	3	3	3	3	3	1	3	3
4	4	4	4	4	4	4	4	4
ANIMAL ID	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	4	4	4	4	4	4	4	4
	5	5	6	6	6	6	6	6
	2	5	0	2	4	5	6	7
	*TOTALS							

Inflammation, Acute

1 1.0

General Body System

Tissue NOS

1

Genital System

Preputial Gland

1

Hypertrophy

1 3.0

Seminal Vesicle

+ + + + + + 39

Hypertrophy

4 3 4 4 4 4 38 3.8

Infiltration Cellular, Megakaryocyte

1 2.0

Testes

+ + + + + + + + 57

Degeneration

2 2.0

Mineralization

1 2.0

Hematopoietic System

Lymph Node, Mandibular

+ + + + + + + + 44

Infiltration Cellular, Histiocyte

2 2.0

Infiltration Cellular, Plasma Cell

1 3.0

Infiltration Cellular, Polymorphnuclear

1 3.0

Pigmentation

2 2.0

Lymph Node, Mesenteric

+ + + + + + M 45

Ectasia

1 2.0

Erythrophagocytosis

3 3 1 2 18 2.1

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

- 1) Minimal 3) Moderate
- 2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:26

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Male
7M**

DAY ON TEST								
	0	0	0	0	0	0	0	0
	7	7	7	7	7	0	7	7
	3	3	3	3	3	1	3	3
	4	4	4	4	4	4	4	4
ANIMAL ID	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	4	4	4	4	4	4	4	4
	5	5	6	6	6	6	6	6
	2	5	0	2	4	5	6	7

***TOTALS**

Infiltration Cellular, Histiocyte	2	1	1	1	2		32	1.5
Infiltration Cellular, Megakaryocyte							3	1.7
Inflammation, Granulomatous							1	3.0
Spleen	+	+	+	+	+	+	+	49
Hematopoietic Cell Proliferation							5	3.0
Hyperplasia, Lymphoid							3	2.0
Infiltration Cellular, Histiocyte							1	2.0
Thymus	M	M	+	+	M	M	M	11

Integumentary System

Skin		+		2				
Atrophy			3			1	3.0	
Dermis, Atrophy						1	2.0	

Musculoskeletal System

NONE

Nervous System

NONE

Respiratory System

Lung	+	+	+	+	+	+	+	58
Alveolar Epith, Hyperplasia							1	3.0
Alveolus, Infiltration Cellular, Histiocyte							3	3.3
Congestion							1	3.0

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:26

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Male
7M**

DAY ON TEST								
	0	0	0	0	0	0	0	0
	7	7	7	7	7	0	7	7
	3	3	3	3	3	1	3	3
	4	4	4	4	4	4	4	4
ANIMAL ID	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	4	4	4	4	4	4	4	4
	5	5	6	6	6	6	6	6
	2	5	0	2	4	5	6	7

***TOTALS**

Congestion	1	3.0
Inflammation, Granulomatous	1	1.0
Pleura	1	

Special Senses System

Zymbal's Gland	1	
----------------	---	--

Urinary System

Kidney	+	+	+	+	+	+	+	53
Cortex, Mineralization								2 1.5
Fibrosis								1 2.0
Inflammation, Acute								1 3.0
Metaplasia, Osseous								1 1.0
Nephropathy	2	1	1	1				22 1.6
Pelvis, Hydronephrosis								2 3.0
Renal Tubule, Cyst	3					2		3 2.7
Renal Tubule, Degeneration								1 2.0
Renal Tubule, Dilatation					2			16 1.9
Urinary Bladder	+	+	+	+	+	+	+	50

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

- 1) Minimal 3) Moderate
- 2) Mild 4) Marked

Experiment Number: 92003-02

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:26

First Dose M/F: NA / NA

Lab: NIEHS

Alimentary System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Type: CHRONIC

Species/Strain: Mouse/B6C3E1

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:27

First Dose M/F: NA / NA

Lab: NIEHS

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

† Tissue examined microscopically

M ..Missing tissue

X - Lesion present

A. Autolysis precludes evaluation

I Insufficient tissue

BLANK Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:27

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Male 9M	DAY ON TEST	0 0																				
		7 7 7 7 0 7 7 7 6 7 6 7 7 7 7 7 6 7 6 7 7 7 7 7 7 5 7 7 7																				
		3 3 1 3 1 1 2 3 4 3 0 3 3 3 3 3 3 1 3 5 3 3 1 3 5 3 3 3 1 3 3																				
		5 5 7 5 6 3 1 5 5 9 5 5 5 5 5 4 5 8 5 5 5 5 5 0 7 5 5 5 5																				
		0 0																				
ANIMAL ID		0 0																				
0 0		0 0																				
3 3		3 3																				
0 0 0 0 0 0 1 1 2 2 2 2 3 3 4 4 4 4 4 5 5 5 5 6 6 6 6		0 3 6 7 7 8 5 6 7 8 9 3 7 0 2 3 4 4 5 6 0 1 3 4 9 1 2 3 6 7																				
0 3 6 7 7 8 5 6 7 8 9 3 7 0 2 3 4 4 5 6 0 1 3 4 9 1 2 3 6 7		0 3 6 7 7 8 5 6 7 8 9 3 7 0 2 3 4 4 5 6 0 1 3 4 9 1 2 3 6 7																				

Genital System

Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hypertrophy	3	4																			4
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+
Degeneration																	2				1
Mineralization																		1			

Hematopoietic System

Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	M	+	+	+
Hyperplasia, Plasma Cell																	4				
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	M	M	+	+	+
Erythrophagocytosis																3					3
Hemorrhage																					
Infiltration Cellular, Histiocyte			1	2												1	1	1	2	1	2
Infiltration Cellular, Megakaryocyte																					2
Spleen	+	+	+	+	+	+	M	+	A	+	+	+	+	+	+	M	+	A	M	+	+
Angiectasis																					
Hematopoietic Cell Proliferation																					3
Hyperplasia, Lymphoid																3					
Thrombosis		1																			
Thymus	+	+	M	+	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
Atrophy			2																		
Epithel Cell, Hyperplasia																3					

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

Test Compound: NTP 90 diet study

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:27

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Male
9M**

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

1-4 ..Lesion qualified as:

X ..Lesion present

A ..Autolysis precludes evaluation

1) Minimal 3) Moderate

| ..Insufficient tissue

BLANK ..Not examined microscopically

2) Mild 4) Marked

Experiment Number: 92003-02

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:28

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Male 9M	DAY ON TEST	ANIMAL ID																								
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	7	0	7	7	7	7	7	5	7	7	7	7	7	7	7	6	7	7	4	0	0	7	7	7	6	7
8	3	1	3	3	3	3	3	8	3	3	3	3	3	3	3	2	3	0	8	1	3	3	0	3	3	3
3	5	7	5	5	5	5	5	8	5	5	5	5	5	5	5	3	5	1	9	4	5	5	4	5	5	5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
7	8	8	8	9	9	9	9	0	0	1	1	1	2	2	2	3	3	3	3	3	3	3	3	3	3	3
9	2	5	8	6	2	2	9	7	0	0	6	2	3	6	8	2	2	2	4	2	3	4	4	6	7	8

Alimentary System

1

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

| ..Insufficient tissue

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1-4 ..Lesion qualified as:

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2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:28

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Male
9M**

DAY ON TEST	B6C3F1 Mouse Male																			
	9M																			
	ANIMAL ID																			
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	7	0	7	7	7	7	5	7	7	7	7	7	7	7	6	7	7	4	0
0	8	3	1	3	3	3	3	8	3	3	3	3	3	3	3	2	3	0	8	1
3	3	5	7	5	5	5	5	8	5	5	5	5	5	5	5	3	1	9	4	5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4
7	8	8	8	8	9	9	9	0	0	1	1	1	1	2	2	2	3	3	3	4
9	2	5	6	2	5	7	0	6	2	3	6	8	2	3	7	8	2	4	6	7
0	2	5	6	2	5	7	0	6	2	3	6	8	2	3	7	8	2	4	6	7
1	3	6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2	4	5	6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cardiomyopathy																						2
Coron Artery, Inflammation																						4
Coron Artery, Mineralization																						4
Coron Artery, Necrosis																						4
Myocardium, Inflammation																						5

Endocrine System

Adrenal Cortex	M	+	+	M	M	+	+	A	+	+	+	+	M	+	M	+	M	+	M	M	+	+	
Capsule, Hyperplasia	1			2	3	1	2	2	3				1		2	2	3	3	3	3	3	2	
Hypertrophy	2					2	1	3								4		2	2	3	3	1	
Adrenal Medulla	M	+	+	M	M	+	+	A	+	+	+	+	M	+	M	+	M	+	M	M	+	+	
Hypertrophy																						2	
Islets, Pancreatic	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	
Hyperplasia	2	3	4	3	4	1	4	2	2	4	1	4		1	3	2	4	3	2	3	1	2	3
Necrosis																						3	
Pituitary Gland	+	+	+	M	+	+	+	M	+	+	+	+	M	+	M	+	M	+	M	M	+	+	
Cyst																						1	
Thyroid Gland	M	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Follicle, Cyst	1	2	2	2	2	1		2	3				2	2		1	1	2	1				1
Follicular Cel, Hyperplasia	2	2	2	3	1								2	2	1		2	2					2

General Body System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:28

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Male 9M	DAY ON TEST	ANIMAL ID																								
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	7	0	7	7	7	7	7	5	7	7	7	7	7	7	7	6	7	7	4	0	0	7	7	7	6	7
8	3	1	3	3	3	3	3	8	3	3	3	3	3	3	3	2	3	0	8	1	3	3	0	3	3	3
3	5	7	5	5	5	5	5	8	5	5	5	5	5	5	5	3	5	1	9	4	5	5	4	5	5	5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
7	8	8	8	9	9	9	9	0	0	1	1	1	2	2	2	3	3	3	3	3	3	3	3	3	3	3
9	2	5	8	6	2	2	9	7	0	0	6	2	3	6	8	2	2	2	4	2	3	4	4	6	7	8

Genital System

Hematopoietic System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:28

First Dose M/F: NA / NA

Lab: NIEHS

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

M ..Missing tissue

1-4 „Lesion qualified as:

X ..Lesion present

A ..Autolysis precludes evaluation

1) Minimal 3) Moderate

| ..Insufficient tissue

BLANK ..Not examined microscopically

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:29

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Male
9M**

DAY ON TEST								
	0	0	0	0	0	0	0	0
6	7	7	7	7	7	7	7	7
3	3	3	3	3	3	3	3	3
7	5	5	5	5	5	5	5	5
ANIMAL ID	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	4	4	4	4	4	4	7	7
	5	5	5	5	6	6	0	0
	4	6	7	9	1	3	1	2

TOTALS*Alimentary System**

Liver	+	+	+	+	+	+	+	+	62
Angiectasis, Focal									1 2.0
Bile Duct, Cyst									1 3.0
Clear Cell Focus	X				X				17
Clear Cell Focus, Multiple			X						7
Eosinophilic Focus		X							8
Eosinophilic Focus, Multiple				X					2
Hepatocyte, Midzonal, Vacuolization									1 3.0
Cytoplasmic									
Hepatocyte, Necrosis									2 3.0
Midzonal, Vacuolization Cytoplasmic									1 2.0
Mixed Cell Focus									3
Mesentery				+					3
Fat, Necrosis					4				3 3.7
Pancreas	A	+	+	+	+	+	+	+	59
Acinus, Atrophy						1			1 1.0
Acinus, Cyst									1 2.0
Acinus, Degeneration, Focal									1 1.0
Acinus, Necrosis									1 4.0
Acinus, Vacuolization Cytoplasmic		1		2					3 1.3

Cardiovascular System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

- 1) Minimal 3) Moderate
- 2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:29

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Male
9M**

DAY ON TEST								
	0	0	0	0	0	0	0	0
ANIMAL ID	6	7	7	7	7	7	7	7
	3	3	3	3	3	3	3	3
	7	5	5	5	5	5	5	5
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	4	4	4	4	4	4	7	7
	5	5	5	5	6	6	0	0
	4	6	7	9	1	3	1	2

***TOTALS**

Heart + + + + + + + + 64

Cardiomyopathy	2	1.5
Coron Artery, Inflammation	4	2.8
Coron Artery, Mineralization	1	1.0
Coron Artery, Necrosis	1	4.0
Myocardium, Inflammation	1	2.0

Endocrine System

Adrenal Cortex	+	+	+	+	+	M	M	46
Capsule, Hyperplasia	2	2		2	3			38 2.3
Hypertrophy		2	3		2			25 1.9
Adrenal Medulla	A	+	+	+	+	M	M	43
Hypertrophy								1 2.0
Islets, Pancreatic	A	+	+	+	+	+	+	60
Hyperplasia		3		4	1	4	4	53 3.0
Necrosis								1 4.0
Pituitary Gland	A	+	+	+	+	+	M	48
Cyst								1 1.0
Thyroid Gland	A	+	+	+	+	+	+	56
Follicle, Cyst		2	2	2				27 1.9
Follicular Cel, Hyperplasia		1		2		1		25 1.6

General Body System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

- 1) Minimal 3) Moderate
- 2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:29

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Male
9M**

DAY ON TEST								
	0	0	0	0	0	0	0	0
6	7	7	7	7	7	7	7	7
3	3	3	3	3	3	3	3	3
7	5	5	5	5	5	5	5	5
ANIMAL ID	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	4	4	4	4	4	4	7	7
	5	5	5	5	6	6	0	0
	4	6	7	9	1	3	1	2

TOTALS*Genital System**

Seminal Vesicle		+		+		26	
Hypertrophy			3		4		26 3.7
Testes	+	+	+	+	+	+	62
Degeneration			3				3 2.0
Mineralization							1 1.0

Hematopoietic System

Lymph Node, Mandibular	A	+	+	+	+	+	+	56	
Hyperplasia, Plasma Cell								1	4.0
Lymph Node, Mesenteric	M	+	+	+	+	+	+	53	
Erythrophagocytosis		2			2			11	2.3
Hemorrhage								1	3.0
Infiltration Cellular, Histiocyte			1		1	1		32	1.5
Infiltration Cellular, Megakaryocyte								1	2.0
Spleen	A	+	+	+	+	+	+	55	
Angiectasis		2						1	2.0
Hematopoietic Cell Proliferation								3	2.3
Hyperplasia, Lymphoid								1	3.0
Thrombosis								1	1.0
Thymus	M	+	M	M	M	M	M	13	
Atrophy								1	2.0
Epithel Cell, Hyperplasia								1	3.0

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M ..Missing tissue

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Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:29

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Male
9M**

DAY ON TEST								
	0	0	0	0	0	0	0	0
6	7	7	7	7	7	7	7	7
3	3	3	3	3	3	3	3	3
7	5	5	5	5	5	5	5	5
ANIMAL ID	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	4	4	4	4	4	4	7	7
	5	5	5	5	6	6	0	0
	4	6	7	9	1	3	1	2

***TOTALS**

Integumentary System

Mammary Gland	1
Skin	3
Inflammation, Chronic Active	1 4.0
Subcut Tiss, Inflammation, Acute	1 4.0

Musculoskeletal System

NONE

Nervous System

Brain	1
-------	---

Respiratory System

Lung	+	+	+	+	+	+	+	63
Alveolus, Infiltration Cellular, Histiocyte	3							4 3.3

Special Senses System

Eye	1
Degeneration	1 3.0
Harderian Gland	3

Urinary System

Kidney	+	+	+	+	+	+	+	61
Cyst, Focal								1 2.0

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

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Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:29

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Male
9M**

DAY ON TEST								
	0	0	0	0	0	0	0	0
6	7	7	7	7	7	7	7	7
3	3	3	3	3	3	3	3	3
7	5	5	5	5	5	5	5	5

ANIMAL ID								
	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
4	4	4	4	4	4	4	7	7
5	5	5	5	5	6	6	0	0
4	6	7	9	1	3	1	2	

*TOTALS

Nephropathy	1	1	32	1.5
Pelvis, Inflammation			1	3.0
Renal Tubule, Cyst	3	2	2	2.5
Renal Tubule, Dilatation	2		14	1.8
Urinary Bladder	A	+	59	
Inflammation, Chronic		+	1	4.0

END OF MALE DATA

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:29

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Female 7F	DAY ON TEST																				
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		7	7	7	5	7	7	7	5	5	7	7	0	7	6	7	7	7	6	7	6
		3	3	3	7	3	3	3	1	6	8	3	3	1	3	2	3	3	3	3	4
		6	6	6	0	6	6	7	7	0	8	6	6	7	0	6	3	6	6	4	6
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5
		6	7	7	7	7	7	8	8	8	8	9	9	9	9	0	0	1	2	2	3
		8	1	2	3	5	6	9	0	1	5	8	0	2	5	6	1	3	7	9	5

Alimentary System

Intestine Small, Jejunum																						
Liver	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	
Basophilic Focus																						
Clear Cell Focus																						
Clear Cell Focus, Multiple																						
Eosinophilic Focus	X				X	X																
Eosinophilic Focus, Multiple	X				X																	
Hematopoietic Cell Proliferation																						
Hepatocyte, Necrosis																						
Infiltration Cellular, Mast Cell, Diffuse																						
Inflammation, Focal																						
Mixed Cell Focus, Multiple																						
Periportal, Infiltration Cellular, Lymphocyte																						
Mesentery	+																					
Fat, Necrosis	3																					
Pancreas	+	+	+	A	+	+	+	A	A	A	+	+	+	+	+	+	+	+	+	+	A	
Acinus, Degeneration					2						2											
Acinus, Inflammation						2															2	
Acinus, Vacuolization Cytoplasmic																					2	

Cardiovascular System

Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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Experiment Number: 92003-02

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:30

First Dose M/F: NA / NA

Lab: NIEHS

Endocrine System

General Body System

Genital System

Ovary	+	+	+	A	+	+	+	M	A	+	+	+	M	+	+	+	+	+	+	A	I	+	+	+	A
Bilateral, Cyst																									
Bilateral, Infiltration Cellular, Histiocyte																									
Cyst								2	4		3	3					2		1						1
Uterus	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+
Bilateral, Cyst	3				4	3	4	3	4	3	2	3	4	3	4	1	4	4	3	4		4	2	2	

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

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X ..Lesion present

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CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:30

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Female 7F	DAY ON TEST																								
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		1	7	7	7	7	7	6	7	7	6	7	7	7	7	1	6	7	7	7	6	7	4	7	7
		3	3	3	3	1	3	2	3	3	3	7	3	3	3	3	5	3	3	3	3	2	3	3	3
		9	7	6	6	4	6	3	7	6	6	6	6	6	6	9	3	6	7	6	6	4	7	1	6
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6
		5	5	5	5	6	6	6	6	7	7	8	8	9	9	9	9	9	0	0	0	0	1	1	1
		3	4	6	8	0	2	4	5	6	0	7	4	6	0	1	2	4	8	9	1	2	3	5	7

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+				
Capsule, Hyperplasia	2	2	3	2	3	1	3	3	3		2	2	3	2	2			2	1	2	3	3	2	3	2	2	2				
Adrenal Medulla	+	M	+	+	+	A	M	+	+	M	+	+	+	+	+	+	+	+	+	+	A	+	+	M	M	+	+				
Islets, Pancreatic	+	+	+	+	+	A	+	+	+	M	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+				
Hyperplasia																										3	1	1			
Pituitary Gland	+	+	+	M	+	M	+	+	M	+	+	+	+	+	+	+	+	+	+	+	M	I	+	+	+	+	M	+	+		
Thyroid Gland	+	+	+	+	+	A	+	+	+	M	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+		
Cyst																											1				
Follicle, Cyst	2		1	1		3	1	1		2	1	1	2	3			2			2					1	1	2				
Follicular Cel, Hyperplasia						1		1	1		2							2			2				1	1	1				
Inflammation																	1														

General Body System

Tissue NOS	+																												
------------	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Genital System

Ovary	+	+	+	M	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	
Bilateral, Cyst																													
Bilateral, Infiltration Cellular, Histiocyte				3																									
Cyst																					2	2			1	2	2	2	
Uterus	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	
Bilateral, Cyst	4	2	4	4	3	1	2	4	3	4	4	4	2		3	4	4	3	4		1	4	4	4	4	4	4	4	

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

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I ..Insufficient tissue

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:31

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Female 7F	DAY ON TEST																										
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		1	7	7	7	7	7	6	7	7	6	7	7	7	7	1	6	7	7	7	6	7	4	7	7	7	7
		3	3	3	3	1	3	2	3	3	3	7	3	3	3	3	5	3	3	3	3	3	2	3	3	3	3
		9	7	6	6	4	6	3	7	6	6	6	6	6	6	9	3	6	7	6	6	4	7	1	6	7	6
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6
		5	5	5	5	6	6	6	6	7	7	8	8	9	9	9	9	9	0	0	0	0	1	1	1	1	1
		3	4	6	8	0	2	4	5	6	0	7	4	6	0	1	2	4	8	9	1	2	3	5	7	9	0
Cyst		1	2																				4		2		
Vagina																											
Hematopoietic System																											
Lymph Node, Mandibular		+	+	+	M	+	A	+	+	+	M	+	+	+	+	+	+	+	+	+	M	+	M	+	+	+	
Hemorrhage																											
Infiltration Cellular, Mast Cell																										3	
Lymph Node, Mesenteric		+	+	+	+	+	A	+	+	+	M	+	+	+	+	+	+	+	+	+	M	+	A	+	+	+	
Erythropagocytosis																										2	
Hyperplasia, Lymphoid																										3	
Infiltration Cellular, Histiocyte		1																			2	2	2	2	2	2	1
Spleen		+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	A	+	+	+	
Hematopoietic Cell Proliferation			2	3	3																					3	
Hyperplasia, Lymphoid																											
Infiltration Cellular, Mast Cell																										3	
Thymus		M	+	+	M	M	M	+	+	+	M	M	M	M	M	M	M	M	M	M	+	M	+	M	M		
Epithel Cell, Hyperplasia																										3	

Integumentary System

Skin

Musculoskeletal System

NONE

Nervous System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

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2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:31

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Female
7F

DAY ON TEST								
	0	0	0	0	0	0	0	0
7	0	7	7	7	7	7	0	7
3	1	3	3	3	3	3	6	3
6	4	6	6	6	6	8	6	

ANIMAL ID								
	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
6	6	6	6	6	6	6	6	6
1	2	2	2	2	2	2	3	3
9	0	3	5	6	8	4	6	

TOTALS*Alimentary System**

Intestine Small, Jejunum								1
Liver	+	+	+	+	+	+	+	60
Basophilic Focus								1
Clear Cell Focus						X		4
Clear Cell Focus, Multiple								3
Eosinophilic Focus								14
Eosinophilic Focus, Multiple								7
Hematopoietic Cell Proliferation							1	2.0
Hepatocyte, Necrosis							2	2.0
Infiltration Cellular, Mast Cell, Diffuse							1	2.0
Inflammation, Focal							2	2.5
Mixed Cell Focus, Multiple							3	
Periportal, Infiltration Cellular, Lymphocyte							1	2.0
Mesentery	+							15
Fat, Necrosis		3					15	3.5
Pancreas	+	+	+	+	+	+	+	54
Acinus, Degeneration							3	1.7
Acinus, Inflammation							5	2.0
Acinus, Vacuolization Cytoplasmic							1	2.0

Cardiovascular System

Heart	+	+	+	+	+	+	+	62
-------	---	---	---	---	---	---	---	----

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

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2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:31

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Female 7F	DAY ON TEST	0	0	0	0	0	0	0
		7	0	7	7	7	0	7
		3	1	3	3	3	6	3
		6	4	6	6	6	8	6
	ANIMAL ID	0	0	0	0	0	0	0
*TOTALS								

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	52	
Capsule, Hyperplasia	2	3	3	3	2	2	52	2.4
Adrenal Medulla	+	+	+	+	+	+	45	
Islets, Pancreatic	+	+	+	+	+	+	53	
Hyperplasia	1	2		2			27	1.6
Pituitary Gland	M	+	+	+	+	+	47	
Thyroid Gland	+	+	+	+	+	+	54	
Cyst							1	1.0
Follicle, Cyst	2	1	2	2	2	1	36	1.5
Follicular Cel, Hyperplasia	1			2		1	20	1.4
Inflammation							1	1.0

General Body System

Tissue NOS							3	
------------	--	--	--	--	--	--	---	--

Genital System

Ovary	+	+	+	+	+	+	52	
Bilateral, Cyst					1		1	1.0
Bilateral, Infiltration Cellular, Histiocyte							1	3.0
Cyst			2				14	2.1
Uterus	+	+	+	+	+	+	58	
Bilateral, Cyst	3	4	4	3	2		47	3.2

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

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Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:31

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Female
7F

DAY ON TEST								
	0	0	0	0	0	0	0	0
7	0	7	7	7	7	7	0	7
3	1	3	3	3	3	3	6	3
6	4	6	6	6	6	8	6	

ANIMAL ID								
	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
6	6	6	6	6	6	6	6	6
1	2	2	2	2	2	3	3	3
9	0	3	5	6	8	4	6	

***TOTALS**

Cyst 2 9 2.4

Vagina 1

Hematopoietic System

Lymph Node, Mandibular	+	+	+	+	+	+	49	
Hemorrhage							1	2.0
Infiltration Cellular, Mast Cell							1	3.0
Lymph Node, Mesenteric	M	+	+	+	+	M	43	
Erythrophagocytosis							3	1.7
Hyperplasia, Lymphoid							1	3.0
Infiltration Cellular, Histiocyte		2	2	2	1		26	1.6
Spleen	+	+	+	+	+	+	55	
Hematopoietic Cell Proliferation							14	2.6
Hyperplasia, Lymphoid							1	3.0
Infiltration Cellular, Mast Cell							1	3.0
Thymus	M	+	M	M	+	M	20	
Epithel Cell, Hyperplasia							5	2.0

Integumentary System

Skin 4

Musculoskeletal System

NONE

Nervous System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:31

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Female
7F**

DAY ON TEST								
	0	0	0	0	0	0	0	0
7	0	7	7	7	7	0	7	
3	1	3	3	3	3	6	3	
6	4	6	6	6	6	8	6	

ANIMAL ID								
	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
6	6	6	6	6	6	6	6	6
1	2	2	2	2	2	3	3	3
9	0	3	5	6	8	4	6	

*TOTALS

NONE

Respiratory System

Lung	+	+	+	+	+	+	60	
Alveolar Epith, Hyperplasia							3	2.0
Alveolus, Infiltration Cellular, Histiocyte							1	2.0
Hemorrhage							1	1.0
Infiltration Cellular, Lymphocyte							1	3.0

Special Senses System

Eye	1
Harderian Gland	1

Urinary System

Kidney	+	+	+	+	+	+	56	
Metaplasia, Osseous							2	1.0
Nephropathy			1				13	1.3
Urinary Bladder	+	+	+	+	+	+	51	
Inflammation, Acute							1	4.0

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Type: CHRONIC

Species/Strain: Mouse/B6C3E1

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:31

First Dose M/F: NA / NA

Lab: NIEHS

Alimentary System

Cardiovascular System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A. Autolysis precludes evaluation

I. Insufficient tissue

BLANK - Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:32

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Female 9F	DAY ON TEST																					
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		7	7	0	1	7	7	7	7	6	6	7	7	5	7	7	6	7	7	7	7	7
		3	3	7	2	3	3	3	3	9	7	3	3	6	3	3	6	3	3	3	3	3
		8	7	0	1	8	7	7	7	5	8	8	1	8	7	1	7	8	7	7	7	7
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5
		6	7	7	8	8	8	9	9	9	9	9	0	0	0	0	1	1	1	1	2	2
		9	4	8	2	3	9	3	4	7	8	9	0	4	5	6	8	0	1	2	6	7

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	M	+	+	+	A	M	+	+	+	+	+	+	+	M	+	M	+	+	+	+	+	+		
Capsule, Hyperplasia	3	3		2	3	3	3	4		4	3	3			3	2	3	3	2	2	3	3	3	3		3	2	2	2	2	2	
Zona Reticul, Vacuolization Cytoplasmic																																
Adrenal Medulla	+	+	M	M	+	+	+	+	M	+	+	+	A	M	+	M	+	+	+	+	+	M	+	M	+	+	+	+	+	+		
Islets, Pancreatic	+	+	+	+	+	+	+	+	M	+	+	+	A	+	+	M	+	+	+	+	+	M	+	M	+	+	+	+	+	+	+	
Hyperplasia																																
Pituitary Gland	+	+	+	+	+	+	+	M	+	M	M	+	A	+	+	+	+	+	+	M	+	M	+	M	M	+	M	M	+	+		
Pars Distalis, Hyperplasia																																
Thyroid Gland	+	+	+	+	+	+	+	+	M	+	+	+	A	+	+	+	+	+	+	+	+	M	+	M	+	M	M	+	M	M	+	
Follicle, Cyst																																
Follicular Cel, Hyperplasia	2									1	2					2	1	2	1	3	1	2	1	1	1	1	1	1	2	1	1	1

General Body System

Tissue NOS	+																															
Genital System																																
Ovary	+	+	M	+	+	+	+	+	M	+	+	+	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Bilateral, Cyst																																
Cyst	4	3								2	3		3	2													1	1	1	1		
Hemorrhage																																
Infiltration Cellular, Lymphocyte																																3
Uterus	+	+	M	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:32

First Dose M/F: NA / NA

Lab: NIEHS

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

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1) Minimal 3) Moderate

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Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:32

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Female 9F	DAY ON TEST																								
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	5	7	7	7	6	7	7	7	
		3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	7	3	3	3	9	3	3	3
		7	7	7	7	7	1	8	8	7	7	8	7	7	8	8	7	4	8	7	7	7	8	8	7
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6
		3	3	4	4	4	5	5	5	5	5	6	6	6	7	7	8	8	8	8	9	0	0	1	1
		7	8	6	8	9	1	2	5	7	9	1	3	7	2	8	9	1	2	7	8	9	5	0	4

Alimentary System

Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Angiectasis																											2
Basophilic Focus																											X
Clear Cell Focus																											X
Clear Cell Focus, Multiple																											
Eosinophilic Focus							X																				X
Eosinophilic Focus, Multiple																											
Hepatocyte, Necrosis																											3
Hepatocyte, Vacuolization Cytoplasmic																											
Infiltration Cellular, Lymphocyte																											
Mixed Cell Focus																											
Mixed Cell Focus, Multiple																											
Mesentery																											
Fat, Inflammation																											1
Fat, Necrosis																											
Pancreas	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	M	+	
Acinus, Degeneration																											
Acinus, Hypertrophy																											1
Acinus, Vacuolization Cytoplasmic																											
Heart	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	1																										

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

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Experiment Number: 92003-02

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:33

First Dose M/F: NA / NA

Lab: NIEHS

Endocrine System

Adrenal Cortex	+	+	M	M	+	+	+	+	+	+	+	+	+	+	+	M	+	M	+	+	+	M	A	M	+	+	+		
Capsule, Hyperplasia	3	1			2	3	3	3	2	2	3	3	2	2	2	2	2	3	2	2	2	2	2	2	3	3			
Zona Reticul, Vacuolization Cytoplasmic																													
Adrenal Medulla	+	M	M	M	+	+	+	+	M	+	M	+	+	+	+	+	M	+	M	+	+	+	M	M	A	M	+	+	+
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	M	+	+	M	+	+	+	+	+	+	+
Hyperplasia					2			2									2		2			2		2	1	1			
Pituitary Gland	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	M	M	+	+	+	+	+	+	+	+	+	+
Pars Distalis, Hyperplasia						2		2									2		2			2							
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	I	+	+	+	+	+	+	+	+	+
Follicle, Cyst	2	1	1	1	1	2	1	1	2	2	1	1	1	1	2		2		2		2	2	2	1	2	2	2	1	
Follicular Cel, Hyperplasia	2	2	1	2	1	2	2	1	2	2	2	1	3	2		2	1	2		2	1	2	2	1	1	1	1	1	

General Body System

Tissue NOS

Genital System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

| ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:33

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Female 9F	DAY ON TEST																				
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
		3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		7	7	7	7	7	1	8	8	7	7	8	7	7	8	7	7	7	7	8	8
ANIMAL ID		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6
		3	3	4	4	4	5	5	5	5	6	6	6	7	7	8	8	8	9	0	1
		7	8	6	8	9	1	2	5	7	9	1	3	7	2	8	9	1	2	4	6
Bilateral, Cyst		4		2	4		4		3	2		4		3	1	3	4		4		3
Cyst			2						2									2	3	4	
Inflammation, Acute																					2
Hematopoietic System																					
Lymph Node, Mandibular		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	M	+
Erythrophagocytosis																		1	3		
Hemorrhage																					
Lymph Node, Mesenteric		+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	M	+
Atrophy																					
Erythrophagocytosis																					
Hyperplasia, Lymphoid																			2		
Infiltration Cellular, Histiocyte		1		2	1	1		2	1	1		1		1	1	2		1	2		2
Infiltration Cellular, Plasma Cell																			3		
Spleen		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+
Hematopoietic Cell Proliferation								2			3				2		3	3	2	3	2
Hyperplasia, Lymphoid																			3		
Thymus		+	+	M	M	M	M	+	+	+	+	M	+	+	M	M	M	+	+	M	M
Angiectasis																					
Epithel Cell, Hyperplasia																				2	
Integumentary System																					
Mammary Gland																					+
Skin																					

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:33

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Female
9F**

DAY ON TEST	0	0	0	0	0	0	0	0
6	7	7	6	4	6	7	7	7
4	3	3	5	9	2	2	2	3
8	7	8	0	7	3	1	7	7

ANIMAL ID

0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
6	6	6	6	6	6	7	7
2	2	2	3	3	3	0	0
4	7	9	1	2	3	3	4

TOTALS*Alimentary System**

Liver	+	+	+	A	+	A	62	
Angiectasis							1	2.0
Basophilic Focus							1	
Clear Cell Focus							3	
Clear Cell Focus, Multiple							1	
Eosinophilic Focus							7	
Eosinophilic Focus, Multiple							8	
Hepatocyte, Necrosis							2	3.0
Hepatocyte, Vacuolization Cytoplasmic							1	2.0
Infiltration Cellular, Lymphocyte							1	2.0
Mixed Cell Focus							1	
Mixed Cell Focus, Multiple							1	
Mesentery							12	
Fat, Inflammation							1	1.0
Fat, Necrosis							11	3.6
Pancreas	M	+	+	M	+	A	57	
Acinus, Degeneration							2	1.0
Acinus, Hypertrophy		1					2	1.0
Acinus, Vacuolization Cytoplasmic							3	1.3

Cardiovascular System

Heart	+	+	+	A	+	A	64	
-------	---	---	---	---	---	---	----	--

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:33

First Dose M/F: NA / NA

Lab: NIEHS

B6C3F1 Mouse Female 9F	DAY ON TEST								
		0	0	0	0	0	0	0	0
		6	7	7	6	4	6	7	7
		4	3	3	5	9	2	2	3
		8	7	8	0	7	3	1	7
		0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0
		6	6	6	6	6	6	7	7
		2	2	2	3	3	3	0	0
		4	7	9	1	2	3	3	4

*TOTALS

Endocrine System

Adrenal Cortex	M	+	+	M	+	A		52	
Capsule, Hyperplasia		3	2		2			50	2.5
Zona Reticul, Vacuolization Cytoplasmic							1	4.0	
Adrenal Medulla	M	+	+	M	+	A		45	
Islets, Pancreatic	M	+	+	M	+	A		58	
Hyperplasia				1	1			22	1.7
Pituitary Gland	+	+	+	+	+	M		52	
Pars Distalis, Hyperplasia							5	2.0	
Thyroid Gland	M	+	+	A	+	A		60	
Follicle, Cyst		2	1				44	1.4	
Follicular Cel, Hyperplasia		2		1			42	1.7	

General Body System

Tissue NOS		2
------------	--	---

Genital System

Ovary	M	+	+	A	+	A		59	
Bilateral, Cyst							1	3.0	
Cyst			3				21	2.3	
Hemorrhage							1	3.0	
Infiltration Cellular, Lymphocyte							1	3.0	
Uterus	+	+	+	A	+	A		63	

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:33

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Female
9F**

DAY ON TEST								
	0	0	0	0	0	0	0	0
	6	7	7	6	4	6	7	7
	4	3	3	5	9	2	2	3
	8	7	8	0	7	3	1	7
ANIMAL ID	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	6	6	6	6	6	6	7	7
	2	2	2	3	3	3	0	0
	4	7	9	1	2	3	3	4

***TOTALS**

Bilateral, Cyst	3	4	2				42	3.2
Cyst							12	3.2
Inflammation, Acute							1	2.0

Hematopoietic System

Lymph Node, Mandibular	M	+	+	A	M	A	54	
Erythrophagocytosis							3	2.0
Hemorrhage			1				1	1.0
Lymph Node, Mesenteric	M	+	M	M	A	M	51	
Atrophy							1	3.0
Erythrophagocytosis							1	2.0
Hyperplasia, Lymphoid							1	2.0
Infiltration Cellular, Histiocyte		2					26	1.4
Infiltration Cellular, Plasma Cell							1	3.0
Spleen	+	+	+	A	+	A	61	
Hematopoietic Cell Proliferation							21	2.6
Hyperplasia, Lymphoid							3	2.7
Thymus	M	M	+	M	M	M	25	
Angiectasis							1	2.0
Epithel Cell, Hyperplasia							6	2.2

Integumentary System

Mammary Gland							1	
Skin				A			7	

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 92003-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: NTP 90 diet study

CAS Number: DIET90

Date Report Requested: 10/21/2014

Time Report Requested: 22:04:34

First Dose M/F: NA / NA

Lab: NIEHS

**B6C3F1 Mouse Female
9F**

DAY ON TEST	0	0	0	0	0	0	0	0
	6	7	7	6	4	6	7	7
	4	3	3	5	9	2	2	3
	8	7	8	0	7	3	1	7
	0	0	0	0	0	0	0	0

ANIMAL ID

0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
6	6	6	6	6	6	7	7
2	2	2	3	3	3	0	0
4	7	9	1	2	3	3	4

***TOTALS**

Hair Follicle, Atrophy 2 2.5

Hair Follicle, Cyst 1 3.0

Musculoskeletal System

NONE

Nervous System

NONE

Respiratory System

Lung + + + A + A 64

Alveolus, Infiltration Cellular, Histiocyte 2 2.5

Hemorrhage 1 2.0

Mediastinum, Hemorrhage 1 4.0

Mediastinum, Inflammation, Granulomatous 1 2.0

Pigmentation 2 3.0

Special Senses System

Harderian Gland 4

Urinary System

Kidney + + + + + A 62

Bilateral, Nephropathy 2 1.5

Nephropathy 17 1.6

Urinary Bladder M + + A + A 54

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically M ..Missing tissue

X ..Lesion present A ..Autolysis precludes evaluation

I ..Insufficient tissue BLANK ..Not examined microscopically

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** END OF REPORT **

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